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US Army Corps of Engineers

Part I: Overview of Business

On March 16, 1802 the Army designated the Corp of Engineers as a separate and permanent branch of the Army. Since this time the Corp has served the country by exploring and mapping the western frontier, eliminating navigational hazards and constructing vital navigational structures such as lighthouses, harbors, dams and channels, as well as leading environmental restoration, preservation and recreation projects. The Corp has also played an important role overseas building important infrastructure during times of war or in Allied countries ravished by war.

Part II: Job Specifics

The Army Corp of Engineers has many different branches that works together to build and maintain the critical infrastructure of the country. At the Mississippi River Project we work to maintain a 9 foot channel in the Mississippi and locks and dams up and down the Mississippi for barges to move tons of grain and coal everyday. In order to maintain a 9 foot channel the Mississippi must be dredged, and the material taken from the bottom of the Mississippi must be dumped on Corp owned land. My department works to find good dump locations for the dregs material, and works to create a better environment on the dredge material than had been in that location before.

Part III: Introduce the Problem

My students will be utilizing the environmental analysis skills I’ve learned this Summer to analyze 1 acre of forest and 1 acre of grassland on the Bettendorf High School Campus to determine the quality of each. Based on their analysis they will create solutions to improve each acre, and then actually do something to improve the land.

Part IV: Background

In order to analyze and create solutions to improve the environment students will need to know the different species present in each location, and why a more diverse environment makes the environment more sustainable. Students will also need to know how to do plot surveys so that the acre can be analyzed quickly. Finally, students will need to know how to improve environments and the idea of plant succession.

Part V: Business Solution

The Army Corp of Engineers solves the problem of creating more sustainable environments in many different ways, depending on the elevation, wildlife present, amount of water in the soil and the type of soil in that location.

Part VI: Student Solutions

Students will likely suggest inserting a variety of pollinator plants into the grassland, and removing a lot of the invasive and noxious weeds in the understory of the forest. Some students might suggest leaving both locations alone so that native species can grow back; however that is not the best management strategy since many invasive and noxious weeds will take over the environment.